adding liquid to the precipitate to redissolve the nucleic acid and re-suspend the beads,

applying a magnetic field to draw down the beads, and

separating a supernatant liquid containing the nucleic acid from the beads.

14. The method as claimed in claim 13, wherein said solution has been obtained from a starting ~~impure solution~~ bacterial lysate by the steps of:

forming in the ~~impure solution~~ bacterial lysate a precipitate selected from the group consisting of cell debris, proteins and chromosomal DNA, in the presence of the suspended magnetically attractable beads which precipitate becomes non-specifically associated with the beads,

applying a magnetic field to draw down the precipitate and the associated beads, and

recovering the said solution as a supernatant liquid.

15. A method of making a nucleic-acid-containing liquid by treating a solution by the use of magnetically attractable beads which do not specifically bind the nucleic acid, comprising the steps of:

forming a precipitate comprising protein and nucleic acid in the presence of the suspended magnetically attractable ~~particles~~ beads which precipitate becomes non-specifically associated with the beads,

applying a magnetic field to draw down the beads and the associated precipitate,

separating the precipitate from a supernatant liquid,

adding liquid to the precipitate to selectively re-dissolve the protein and re-suspend the beads and the

associated nucleic acid,

applying a magnetic field to draw down a precipitate of the nucleic acid and the associated beads,

separating a supernatant liquid containing the protein from the precipitate,

adding liquid to the precipitate to redissolve the nucleic acid and re-suspend the beads,

applying a magnetic field to draw down the beads, and

separating a supernatant liquid containing the nucleic acid from the beads.

16. A method for recovering low molecular weight nucleic acids from a starting solution of a material selected from the group consisting of bacteriophage, virus, cell and mixtures thereof, by the use of magnetically attractable beads which do not specifically bind the said material, which method comprises the steps:

precipitating the said material out of solution in the presence of the suspended magnetically attractable beads whereby the material becomes non-specifically associated with the beads,

applying a magnetic field to draw down a precipitate of the material and the associated beads,

lysing the said material to form a cell lysate solution comprising protein, membrane, bacterial DNA and low molecular weight nucleic acids,

precipitating out of solution the protein, membrane and the bacterial chromosomal DNA whereby the precipitate becomes non-specifically associated with the beads,

and recovering the supernatant liquid containing the low molecular weight nucleic acids.

17. The method as claimed in any one of claims 14, 15 and 16, wherein the beads have been pre-treated with a phosphate solution.

18. An automated device for performing a method of making a nucleic-acid-containing liquid by treating a solution by the use of magnetically attractable beads which do not specifically bind the nucleic acid, comprising the steps of:

suspending the magnetically attractable beads in the solution,

precipitating the nucleic acid out of solution whereby it becomes non-specifically associated with the beads,

applying a magnetic field to draw down a precipitate of the beads and the associated nucleic acid,

separating the precipitate from a supernatant liquid,

adding liquid to the precipitate to redissolve the nucleic acid and re-suspend the beads,

applying a magnetic field to draw down the beads, and

separating a supernatant liquid containing the nucleic acid from the beads,

which device comprises an automated pipettor and a magnet.

19. Magnetically attractable beads capable of non-specific association with a nucleic acid, wherein the beads have a coating of phosphate which reduces the tendency of the beads to bind a nucleic acid.

20. Magnetically attractable beads as claimed in claim 19, wherein the coating of phosphate has been formed by pre-treating the beads with a phosphate solution.--